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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/067,050

02/04/2002

Scott A. Leman

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05/04/2006

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EXAMINER

ESHETE, ZELALEM

ART UNIT

PAPER NUMBER

3748

DATE MAILED: 05/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/067,050

Applicant(s)

LEMAN ET AL.

Examiner

Zelalem Eshete

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12 and 17-37 is/are allowed.
- 6) ☐ Claim(s) 13, 14, 38 is/are rejected.
- 7) ☒ Claim(s) 15 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

This Office Action is in response to the amendment filed on 3/27/2006.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 13,14,38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feucht in view of Shinojima (5,611,304).

Regarding claim 13: Feucht discloses an engine valve actuator, comprising: an actuator cylinder having a fluid passage (see figure 1); an actuator piston reciprocally disposed in the actuator cylinder (see figure 2); and a control valve operatively associated with the actuator cylinder (see numeral 20), said control valve having a "housing", said housing receiving low pressure fluid from a low pressure fluid inlet (see numeral 15) and receiving high pressure fluid from a high pressure fluid inlet (see numeral 16), said housing having a fluid outlet (see numeral 21), a "plunger" having first and second ends reciprocally disposed in the "housing" (see numeral 20), the plunger being movable between a first position at which the low pressure fluid inlet is to

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communication with the fluid outlet, and a second position at which the high pressure fluid inlet is in communication with the fluid outlet, the fluid outlet being in fluid communication with the actuator cylinder fluid passage (see figure 1).

Feucht fails to specifically disclose the inherent features of control valve that describes the "structural" implementation of the control valve diagram.

However, Shinojima disclose the structural realization of a control valve that is shown by a diagram (see figure 9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to structurally realize Feucht's control valve diagram by using the "housing" and "plunger" as taught by Shinojima as they represent the inherent features of a control valve.

Regarding claim 14: Shinojima discloses (see figure 9) an electromagnetic device proximate the plunger first end (see numeral 56), and a spring proximate the plunger second end (see numeral 57), said plunger being movable to the first position upon deactuation of the electromagnet device, said plunger being movable to the second position upon actuation of the electromagnetic device (see figure 9).

Regarding claim 38: Feucht's discloses a controller adapted to transmit a control signal to the control valve, wherein the controller is capable of being adapted to cause the plunger to be in the second position during a compression stroke of an engine piston (see column 3, lines 5 to 10).

***Allowable Subject Matter***

3. Claims 15,16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
4. Claims 1-12,17-37 are allowed.

***Response to Arguments***

5. Applicant's arguments filed 3/26/2006 have been fully considered but they are not persuasive.
6. With respect to applicant's argument on page 16: The primary reference discloses the claimed invention as recited above except for the showing of the "housing" and "plunger" structural features of the control valve. The deficiency is cured by the secondary reference that is used only to show the structural implementation of the control valve. The secondary reference is relied only to show "housing" and "plunger" features that are well known in control valve design.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

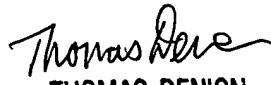
TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zelalem Eshete whose telephone number is (571) 272-4860. The examiner can normally be reached on Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Zelalem Eshete  
Examiner  
Art Unit 3748

  
THOMAS DENION  
SUPERVISORY PATENT EXAMINER  
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